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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/799,823 | 03/12/2004 | Hyeon-Yong Jang | YOM-0074 | 8366 |
| 23413 | 7590 | 08/03/2007 | | |
| CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002 | | | EXAMINER TRAN, MY CHAU T | |
| | | | ART UNIT 2629 | PAPER NUMBER |
| | | | MAIL DATE 08/03/2007 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|---|-------------------------------|----------------------------------|--|
| Advisory Action Before the Filing of an Appeal Brief | Application No. 10/799,823 | Applicant(s) JANG, HYEON-YONG | |
| | Examiner MY-CHAU T. TRAN | Art Unit 2629 | |

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 16 July 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

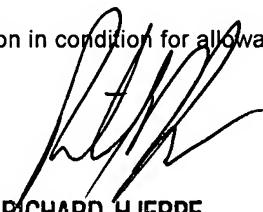
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: NONE.
Claim(s) objected to: 19.
Claim(s) rejected: 1-18, 20 and 21.
Claim(s) withdrawn from consideration: NONE.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Attached Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____.
13. ☐ Other: _____.


RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

ADVISORY ACTION (CONT.)

Application and Claims Status

1. Applicant's amendment and response filed 07/16/2007 are acknowledged and entered.

2. Claims 1-21 were pending. No claims were amended, added and/or cancelled.

Therefore, claims 1-21 are currently pending.

Response to Arguments

3. All rejection(s) and/or objection(s) are maintained and the arguments are addressed below.

4. Applicant's arguments directed to the rejection under 35 U.S.C. 112, first paragraph, (new matter) were considered but they are not persuasive for the following reasons.

[1] Applicant contends that '*there is support in at least the specification and drawings as originally filed for the limitation "voltage supplying unit (transformer) to apply AC voltage (sinusoidal signal) synchronized with the modulated signal (signal SW and lamp current LDS are synchronized) to the light source (lamp unit/lamps) so as to drive (transformer drives the lamp unit) the light source" in claim 1*', and thus, the rejection under 35 U.S.C. 112, first paragraph, (new matter) of claims 1-16 should be withdrawn.

This is not found persuasive for the following reasons:

[1] The examiner respectfully disagrees. It is the examiner's position that the limitation of "*voltage supplying unit to apply AC voltage synchronized with the modulated signal to the*

light source so as to drive the light source” of claim 1 is not supported by the originally filed specification and/or claims.

First, the instant specification does not define that the transformer of ref. #921 is a voltage supplying unit as asserted by applicant in which applicant support this assertion with the passage on page 11, lines 18 and 21-22 of the instant specification. As stated on page 11, lines 18-22 ***‘The inverter 920 drives the lamp unit 910 based on a luminance control signal V_{dim} , the horizontal synchronization signal H_{sync} , and an instruction signal EN for turning on and off the lamp unit 910. Referring to Fig. 4, the inverter 920 according to an embodiment of the present invention includes a transformer (TRANS) 921, a switch circuit (SW) 922, a controller (CTN) 930, an oscillator (OSC) 940, and a phase difference detecting circuit 950, which are connected in series from the lamp unit 910’***, this passage only disclose that the transformer is one structural component of an inverter of ref. #920, which drives the lamp of ref. #910. Consequently, the instant specification does not define that the transformer of ref. #921 is a voltage supplying unit. From the disclosure of the page 11, lines 18-22, the components of the inverter, i.e. the transformer, switch circuit, and controller are connected in series to the lamp unit wherein as depicted by figure 4 the controller is connected to the switch circuit that is connected to the transformer, which is connected to the lamp unit, i.e. the direction of the arrow (voltage movement) as shown by the figure 4 goes from the controller to the switch circuit to the transformer. The instant specification discloses that the controller receive a voltage (see pg. 15, lines 22-25). These disclosures contradict applicant assertion that the transformer is a voltage supplying unit. Additionally, the instant specification define that V_{DDA} is the supply voltage,

Art Unit: 2629

which is a component of the phase difference detecting circuit of ref. #950 (see pg. 12, lines 14-17 and fig. 4).

Second assuming *arguendo* that the transformer is a voltage supplying unit, applicant alleges that the sinusoidal signal generated by the transformer is an AC voltage, which is disclosed at page 13, lines 21-23. However, this section, i.e. pg. 13, lines 21-23, does not define that the sinusoidal signal generated by the transformer is an AC voltage. As stated on page 13, lines 19-24, *'The switch circuit 922 generates a signal SW having on and off levels by switching the DC supply voltage according to the PWM signal as shown in Fig. 5. The transformer 921 generates a sinusoidal signal based on the on/off signal SW and transforms the sinusoidal signal to have a high voltage. The sinusoidal signal generated from the transformer 921 is provided to the lamp unit 910 as the lamp current LDS which turns on the lamps of the lamp unit 910'*, i.e. the DC supplying voltage is supply to the switch circuit that generates a signal to the transformer to generate a sinusoidal signal. Accordingly, the instant specification does not define that the sinusoidal signal generated by the transformer is an AC voltage. Moreover, applicant's argument, i.e. the sinusoidal signal generated by the transformer is an AC voltage, does not rise to the level of factual evidence. See MPEP § 716.01(c): The arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965).

Therefore, the limitation of *"voltage supplying unit to apply AC voltage synchronized with the modulated signal to the light source so as to drive the light source"* of claim 1 is not supported by the originally filed specification and/or claims, and the rejection is maintained.

Art Unit: 2629

5. Applicant's arguments directed to the 103(a) rejection of Tanaka et al. (US Patent 6,011,534) in view of Jefferson (US Patent 6,127,865) were considered but they are not persuasive for the following reasons.

[1] Applicant contends that the 103(a) rejection of Tanaka et al. in view of Jefferson should be withdrawn because a) *'Tanaka does not teach or suggest, however, providing a driving signal to the source in response to the adjusted reference signal as in original claim 17 of the application as filed'* and b) *'there is no teaching or suggestion in Jefferson to supply a driving signal to the light source in response to the adjusted reference signal, as in original claim 17 of the application as filed'*.

[2] Applicant alleges that *'Jefferson teaches a divide-by-two circuit which divides a frequency. However, Jefferson does not teach or suggest performing pulse width modulation, in contrast to and accordance with claim 20 of the present invention'*.

This is not found persuasive for the following reasons:

[1] The examiner respectfully disagrees. It is the examiner's position that the combine teachings of Tanaka et al. and Jefferson do render the method of the instant claims *prima facie* obvious. First, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Second, the comprising language of the instant claimed method would not exclude the method of Tanaka et al. wherein the claimed light source would encompassed the pixel electrode of Tanaka et al. It is known in the art that the liquid crystal device requires both the backlight and the pixel electrode for the

Art Unit: 2629

liquid crystal to transmit light, i.e. the light source for the liquid crystal include both the backlight and the pixel electrode. Accordingly, the comprising language of the instant claimed method would not exclude the method of Tanaka et al. See MPEP § 2111.03.

[2] The examiner respectfully disagrees. It is the examiner's position that the combine teachings of Tanaka et al. and Jefferson do render the method of the instant claims *prima facie* obvious. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Therefore, the combine teachings of Tanaka et al. and Jefferson do render the method of the instant claims *prima facie* obvious, and the rejection is maintained.

6. Applicant's arguments directed to the 103(a) rejection of Tsunoda et al. (US Patent 5,912,713) in view of Kang et al. (US Patent Application Publication US 2004/0004596 A1) were considered but they are not persuasive for the following reasons.

[1] Applicant contends that the 103(a) rejection of Tsunoda et al. in view of Kang et al. should be withdrawn because '*neither Tsunoda nor Kang teach or suggest a controller to modulate the reference signal in response to the control signal and output a modulated signal, as in claim 1 of the present invention*'.

[2] Applicant alleges that '*Kang does not teach or suggest, however, an AC voltage synchronized with the modulated signal, in contrast to and in accordance with claim 1 of the present invention*'.

This is not found persuasive for the following reasons:

[1] The examiner respectfully disagrees. It is the examiner's position that the combine teachings of Tsunoda et al. and Kang et al. do render the device of the instant claims *prima facie* obvious. First, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Second, Tsunoda et al. do suggest the claimed controller of claim 1, i.e. the selector (see col. 6, lines 45-61). Furthermore, the functional limitation of the instant claimed controller, i.e. "*to modulate the reference signal in response to the control signal and output a modulated signal*", does not distinguish the instant claimed controller of claim 1 from the controller, i.e. the selector, suggested by the reference of Tsunoda et al., i.e. there is no structural distinction. See MPEP § 2114.

[2] The examiner respectfully disagrees. It is the examiner's position that the combine teachings of Tsunoda et al. and Kang et al. do render the device of the instant claims *prima facie* obvious. First, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Second, both Tsunoda et al. and Kang et al. disclose a voltage-controlled oscillator, i.e. a voltage supplying unit of claim 1, wherein in Tsunoda et al. the DC voltage supply to the oscillator is synchronized with the modulated signal (Tsunoda: col. 5, lines 52-65) and in Kang et al. the oscillator converts the supplied DC voltage into an AC voltage, and as a result the combine reference of Tsunoda et al.

Art Unit: 2629

and Kang et al. suggest “*a voltage supplying unit to apply AC voltage synchronized with the modulated signal to the light source so as to drive the light source*” of instant claim 1.

Moreover, the functional limitation of the instant claimed a voltage supplying unit, i.e. “*to apply AC voltage synchronized with the modulated signal to the light source so as to drive the light source*”, “”, does not distinguish the instant claimed a voltage supplying unit of claim 1 from the voltage supplying unit, i.e. oscillator, suggested by the combine reference of Tsunoda et al. and Kang et al., i.e. there is no structural distinction. See MPEP § 2114.

Therefore, the combine teachings of Tsunoda et al. and Kang et al. do render the device of the instant claims *prima facie* obvious, and the rejection is maintained.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to MY-CHAU T. TRAN whose telephone number is 571-272-0810. The examiner can normally be reached on Monday: 8:00-2:30; Tuesday-Thursday: 7:30-5:00; Friday: 8:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Richard A. Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2629

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/My-Chau T. Tran/
Patent Examiner
Art Unit 2629
July 28, 2007



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SUPERVISORY PATENT EXAMINER
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